

Field Crops

Growing Season Weather Summary

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The 2003 growing season will be remembered meteorologically for persistently cool temperatures, delayed crop growth and development, and abnormal dryness during the latter half of the season. The late winter and early spring of 2003 was cooler than normal across most sections of the State and was accompanied by extreme low temperatures in late March which damaged some overwintering crops just coming out of dormancy. Soil moisture at the beginning of the season was at below normal levels in most areas of the State due to drier than normal conditions during the preceding winter, but still sufficient for planting and early crop establishment. Relatively dry, warm conditions allowed fieldwork to commence by mid-April and continue into early May, with significant progress in summer crop planting in many areas. In early May, however, a persistent wet and cool weather pattern began which led to major fieldwork and planting delays that continued for much of May into early June.

The month of June averaged out among the coolest observed in Michigan since the infamous 1992 "year without a summer." As a result, summer crop growth and development lagged well behind normal, with nitrogen deficiencies and weed problems also common due to the abnormally cool and wet soils. By mid July, the jet stream pattern across North America shifted temporarily to a more southwesterly orientation, allowing a return of warmer than normal temperatures that continued into late August. Precipitation totals, which had been much above normal during May into early June, dropped off to below normal levels by late June and over most of the State continued into September. During this prolonged period, some sections of central Lower Michigan received less than

half the normal totals. The dryness led to moisture stress problems and yield declines in some areas, especially for later-planted crops and on lighter soils. In stark contrast, rainfall was much heavier across the southern 2 to 3 tiers of counties in the Lower Peninsula, leading to major differences in crop condition across the State. By mid-August, NOAA's Palmer Drought Index, an indicator of long term hydrological deficits and surpluses, categorized some central and northern sections of the State under "severe" drought conditions, while extreme southern sections of the State were considered "abnormally moist."

Temperatures during September averaged out at above normal levels over almost all of the State. Given the delayed nature of many crops, this was fortunate timing, as the first killing freeze of the season (along with snow in some areas) ended the growing season for the majority of the State during the first few days of October, which was near to or earlier than normal in most spots. The freezing temperatures did result in the failure of some crops to reach maturity (and subsequent grain quality problems), mainly in central sections of Lower Michigan where growing degree day deficits were greatest. Overall, for the 5-month May to September period, mean temperatures and growing degree day accumulations were generally well below normal statewide. In some central sections of the State, growing degree day totals were more than 15 percent below normal. The seasonal precipitation totals were highly variable, ranging from much above normal in some southern sections to much below normal in central and northern sections of the State.

Field crops: Acres harvested and value of production, 1999-2003

Item	Unit	1999	2000	2001	2002	2003
Acres harvested	1,000 acres	6,730	6,586	6,378	6,386	6,483
Value of production	1,000 dollars	1,569,098	1,428,981	1,297,764	1,739,957	1,770,443

Grain storage capacity, December 1, 1999-2003

Year	Off farm		On farm capacity
	Facilities	Rated capacity	
	<i>Number</i>	<i>Million bushels</i>	<i>Million bushels</i>
1999	270	141	240
2000	250	141	240
2001	245	146	240
2002	235	148	240
2003	220	145	240

Field crops: Record highs and lows

Crop	Unit	Record high		Record low		Year estimates started
		Quantity	Year	Quantity	Year	
Barley						
Harvested acres	1,000 acres	303	1932	12	2000,2001	1866
Yield per acre	Bushels	68.0	1985	13.5	1933	
Production	1,000 bu	8,400	1918	546	1866	
Dry Edible beans						
Harvested acres	1,000 acres	690	1930	130	2001	1909
Yield per acre	Pounds	2,100	1999	320	1917	
Production	1,000 cwt	8,585	1963	780	2001	
Corn for grain						
Harvested acres	1,000 acres	2,800	1981	480	1866	1866
Yield per acre	Bushels	130.0	1999	21.5	1917	
Production	1,000 bu	293,180	1982	15,120	1869	
Corn for silage						
Harvested acres	1,000 acres	498	1971	200	2003	1924
Yield per acre	Tons	17.5	1999	4.7	1930	
Production	1,000 tons	5,565	1977	1,542	1930	
Hay, alfalfa						
Harvested acres	1,000 acres	1,444	1950	74	1919	1919
Yield per acre	Tons	4.2	1993	1.1	1934	
Production	1,000 tons	5,040	1985,1986	118	1919	
Hay, all						
Harvested acres	1,000 acres	2,947	1924	780	1866	1866
Yield per acre	Tons	3.8	1993	0.6	1895	
Production	1,000 tons	5,743	1986	1,014	1866	
Oats						
Harvested acres	1,000 acres	1,658	1918	55	2001	1866
Yield per acre	Bushels	70.0	2003	18.5	1921	
Production	1,000 bu	69,388	1946	3,520	2001	
Potatoes						
Harvested acres	1,000 acres	374.0	1895	36.4	1975	1866
Yield per acre	Cwt	330.0	2003	26.0	1887,1916	
Production	1,000 cwt	23,256	1904	3,557	1876	
Soybeans						
Harvested acres	1,000 acres	2,130	2001	1	1930	1924
Yield per acre	Bushels	40.0	1995,1999	8.0	1927	
Production	1,000 bu	78,540	2002	10	1930	
Spearmint						
Harvested acres	1,000 acres	8.7	1954	0.7	1935	1935
Yield per acre	Pounds	50.0	2001,2002	20.0	1965	
Production	1,000 lbs	280	1948	27	1996	
Sugarbeets						
Harvested acres	1,000 acres	190	1999	48	1943,1953	1909
Yield per acre	Tons	21.3	1970	5.5	1916	
Production	1,000 tons	3,534	1999	298	1943	
Wheat, winter						
Harvested acres	1,000 acres	1,515	1953	400	1987	1909
Yield per acre	Bushels	72.0	2000	10.5	1912	
Production	1,000 bu	45,600	1984	7,350	1912	

Barley

Michigan barley growers planted 15,000 acres and harvested 14,000 acres in 2003. Total production was 784,000 bushels, up 18 percent from 2002. The average yield increased 5 bushels to 56 bushels per acre. Barley planting in Michigan lagged the five-year average due to cool weather in late April and early May. Wet

weather during the early growing season helped advance the crop. Harvest began later than normal, but hot, dry weather late in August allowed growers to catch up. Combining wrapped up by the end of August. Growers reported good yields and quality.

Barley: Acres, yield, production, and value, 1999-2003

Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Bushels</i>	<i>1,000 bushels</i>	<i>Dollars</i>	<i>1,000 dollars</i>
1999	17	15	66	990	1.70	1,683
2000	13	12	60	720	1.10	792
2001	15	12	56	672	1.50	1,008
2002	14	13	51	663	1.60	1,061
2003	15	14	56	784	1.70	1,333

¹ Marketing year average.

Corn

Michigan had 2.3 million acres planted to corn in 2003, up 2 percent from 2002. Grain corn production was 263.3 million bushels, up 13 percent from 2002; 2.09 million acres were harvested for grain. The yield of 126 bushels per acre was up 9 bushels from the 2002 crop. Farmers harvested 200,000 acres of corn for silage with an average yield of 16.0 tons per acre.

Planting of corn in Michigan began in the last week of April. Normal temperatures and plenty of rain caused good growing conditions but poor planting conditions in May. Planting was completed by early June, and warmer temperatures in mid-June helped the crop to progress. By mid July the crop showed signs of

tasseling. The corn crop was about one to two weeks behind the average stage of development by September 1.

Harvest was prolonged due to high soil moisture content and wet weather. The crop was slow to dry, and harvest continued into late November. Fields remained moist, but cold weather and heavy winds increased drying. Yields varied widely across the State

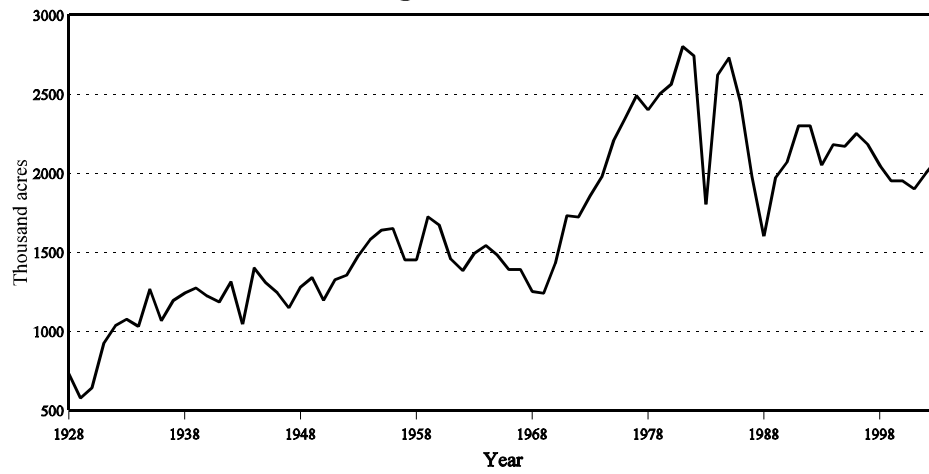
The 2003 corn crop was valued at \$632 million, up 16 percent from 2002. Corn continued to be Michigan's number one crop in value of production. The top three counties in corn production in 2002 were Huron, Sanilac, and Gratiot.

Corn: Acres, yield, production, and value, 1999-2003

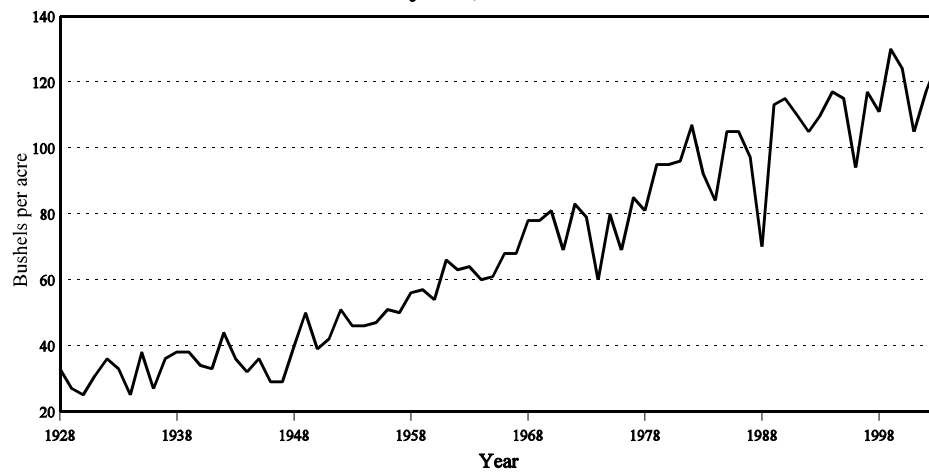
Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Bushels</i>	<i>1,000 bushels</i>	<i>Dollars</i>	<i>1,000 dollars</i>
All						
1999	2,200					
2000	2,200					
2001	2,200					
2002	2,250					
2003	2,300					
Grain						
1999		1,950	130	253,500	1.78	451,230
2000		1,950	124	241,800	1.90	459,420
2001		1,900	105	199,500	1.97	393,015
2002		2,000	117	234,000	2.34	547,560
2003		2,090	126	263,340	2.40	632,016
Silage						
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Tons</i>	<i>1,000 tons</i>		
1999		235	17.5	4,113		
2000		230	14.0	3,220		
2001		280	13.0	3,640		
2002		240	15.0	3,600		
2003		200	16.0	3,200		

¹ Marketing year average.

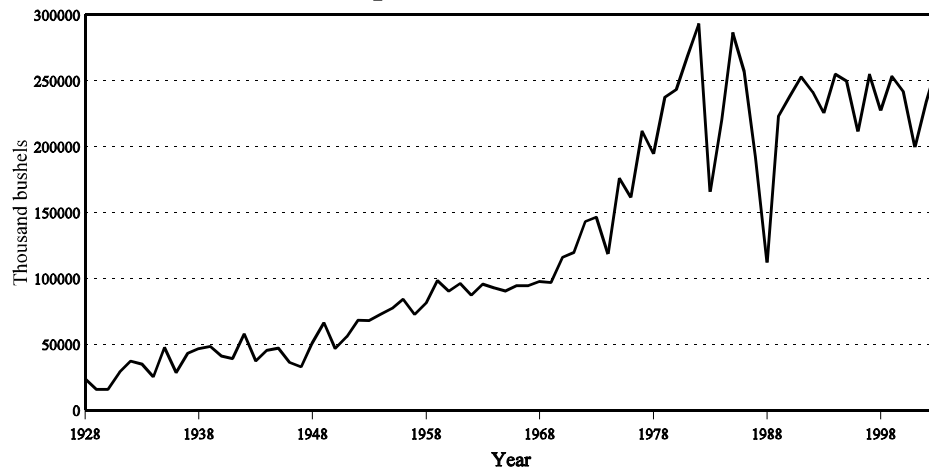
Corn for grain acres, 1928-2003



Corn yield, 1928-2003



Corn production, 1928-2003



Corn for grain: Stocks by quarter, 1999-2003

Crop year	December 1		March 1		June 1		September 1	
	On farm	Off farm	On farm	Off farm	On farm	Off farm	On farm	Off farm
	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>
1999	135,000	68,300	95,000	49,700	53,000	30,500	26,000	15,000
2000	145,000	58,200	90,000	46,800	55,000	24,800	21,000	12,500
2001	120,000	55,700	80,000	46,700	54,000	29,050	16,000	13,600
2002	130,000	59,800	88,000	46,700	40,000	27,600	13,000	9,750
2003	140,000	56,500	77,000	51,300	43,000	34,500		

Corn: Percentage of acreage planted, 1999-2003

Year	Month and day					
	April		May			June
	20	30	10	20	30	10
1999	0	5	46	80	94	98
2000	0	5	46	73	85	94
2001	0	14	62	81	93	100
2002	0	9	34	54	81	96
2003	0	11	33	48	83	98
5-year-average	0.0	8.8	44.2	67.2	87.2	97.2

Corn: Percentage of acreage silked, 1999-2003

Year	Month and day					
	July			August		
	1	10	20	30	10	20
1999	0	10	46	88	100	100
2000	0	1	15	53	81	94
2001	0	2	22	66	91	100
2002	0	0	8	63	88	98
2003	0	0	3	40	86	98
5-year-average	0.0	2.6	18.8	62.0	89.2	98.0

Corn: Percentage of acreage dent stage, 1999-2003

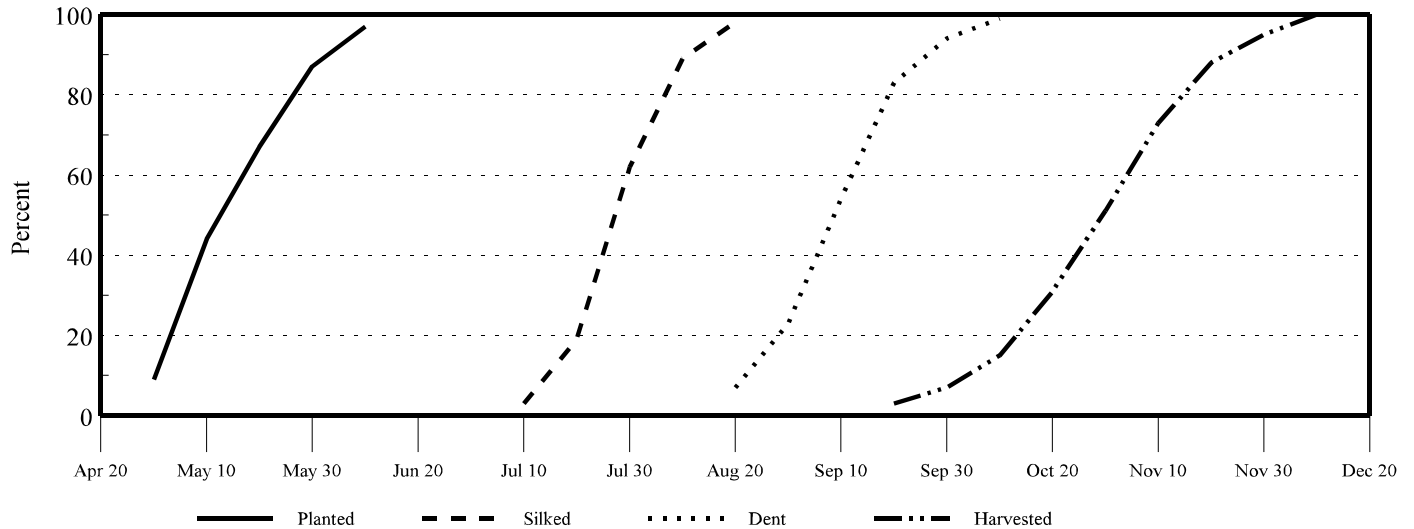
Year	Month and day						
	August			September			October
	10	20	30	10	20	30	10
1999	0	17	50	85	97	100	100
2000	0	3	10	33	73	86	98
2001	0	10	25	52	76	93	98
2002	0	2	16	62	96	98	100
2003	0	1	16	40	73	91	99
5-year-average	0.0	6.6	23.4	54.4	83.0	93.6	99.0

Corn: Percentage of acreage harvested for grain, 1999-2003

Year	Month and day									
	September			October			November			December
	10	20	30	10	20	30	10	20	30	10
1999	2	7	13	28	50	76	89	98	99	100
2000	0	0	3	8	24	40	70	81	94	100
2001	0	3	7	14	27	41	62	87	94	100
2002	0	3	8	20	34	63	89	94	97	100
2003	0	0	3	7	19	37	54	78	91	100
5-year-average	0.4	2.6	6.8	15.4	30.8	51.4	72.8	87.6	95.0	100.0

Corn progress

Five-year-average, 1999-2003



Dry Edible Beans

Michigan dry beans were planted ahead of normal, with adequate moisture. Dry bean planting started with cool temperatures and wet conditions. As the weather warmed up in mid June, dry beans started progressing in mostly good growing conditions. In early July, some dry beans were being sprayed for leafhoppers. In mid July, Michigan received a significant amount of rainfall and signs of root rot started to appear. In late August, dry bean fields were showing maturity with some color change. Mold problems were reported. Harvest started in late September through

mid October. Harvest was ahead of the normal pace with some rain delays.

Michigan's 2003 total dry bean production was 2.5 million hundredweight (cwt) which represented 11 percent of U.S. production. Michigan ranked third in dry bean production for 2003, compared to second last year. The number one dry bean producer in the nation was North Dakota with 7.8 million cwt. Michigan continued to lead the country in cranberry and black bean production.

Dry edible beans: Acres, yield, production, and value, 1999-2003

Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Cwt</i>	<i>1,000 cwt</i>	<i>Dol/cwt</i>	<i>1,000 dollars</i>
1999	350	350	2,100	7,350	16.80	123,480
2000	285	275	1,500	4,125	13.70	56,513
2001	215	130	600	780	24.60	19,188
2002	270	265	1,850	4,903	15.30	75,016
2003	170	165	1,500	2,475	18.60	46,035

¹ Marketing year average.

Dry edible beans: Acres, yield, and production, by class, 1999-2003

Class and Year	Planted	Harvested	Yield	Production
	<i>Acres</i>	<i>Acres</i>	<i>Pounds</i>	<i>1,000 cwt</i>
Black				
1999	108,000	108,000	2,090	2,260
2000	55,000	53,000	1,580	840
2001	63,000	52,000	640	335
2002	110,000	108,000	1,880	2,030
2003	45,000	43,000	1,580	680
Cranberry				
1999	31,000	31,000	1,600	496
2000	26,000	25,000	1,520	380
2001	26,000	12,000	580	70
2002	20,000	19,000	1,530	290
2003	12,000	12,000	1,180	142
Great Northern				
2001	8,000	3,500	570	20
2002	3,000	3,000	2,000	60
2003	8,000	8,000	1,680	134
Navy				
1999	150,000	150,000	2,300	3,450
2000	125,000	120,000	1,500	1,800
2001	65,000	30,000	570	170
2002	85,000	84,000	1,930	1,620
2003	40,000	38,000	1,560	592
Pinto				
1999	9,000	9,000	1,890	170
2000	21,000	20,000	1,450	290
2001	7,000	4,500	510	23
2002	9,500	9,500	1,930	183
2003	11,000	10,500	1,430	150
Red kidney, dark				
1999	9,000	9,000	1,700	153
2000	12,000	12,000	1,520	182
2001	9,000	7,000	430	30
2002	8,500	8,000	1,630	130
2003	9,000	9,000	1,330	120
Red kidney, light				
1999	17,000	17,000	1,800	306
2000	19,000	19,000	1,500	285
2001	18,000	11,000	770	85
2002	15,000	14,500	1,790	260
2003	16,000	15,500	1,540	239
Small, red				
1999	15,000	15,000	2,070	310
2000	8,000	8,000	1,410	113
2001	12,000	6,500	420	27
2002	11,000	11,000	1,890	208
2003	19,000	19,000	1,470	280
Other				
1999	11,000	11,000	1,860	205
2000	19,000	18,000	1,310	235
2001	7,000	3,500	570	20
2002	8,000	8,000	1,530	122
2003	10,000	10,000	1,380	138

Hay and Haylage

Michigan hay production was estimated at 3.12 million tons, down 16 percent from 2002. Alfalfa and alfalfa mixtures accounted for 87 percent of all dry hay produced. All hay harvested acres were estimated at 1.05 million, down from 1.15 million in 2002. The average all hay yield was 2.97 tons per acre, down 0.25 tons from 2002. The first cutting of alfalfa was moved along by good weather conditions in late May. Alfalfa weevils and potato leafhoppers were a concern in the southeast part of the State. Harvest was delayed due to wet weather in some parts of the State

around the first week in June. The second cutting had started in late June with hot and dry weather. By the middle of July, yields and quality had were very good. The third cutting was very short compared to the second cutting. Alfalfa accounted for 850,000 acres of the total harvested with a yield of 3.2 tons per acre. Other hay accounted for 200,000 acres with a yield of 2.0 tons per acre. Value of the hay crop was \$288 million, down 7 percent from 2002.

Hay, haylage, and greenchop: Acres, yield, production, and value, 1999-2003

Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Tons</i>	<i>1,000 tons</i>	<i>Dollars</i>	<i>1,000 dollars</i>
All dry hay						
1999		1,300	3.40	4,415	69.00	305,805
2000		1,300	3.33	4,330	62.50	272,040
2001		1,150	3.14	3,610	70.50	253,510
2002		1,100	3.23	3,551	84.50	297,800
2003		1,050	2.97	3,120	89.00	288,400
Alfalfa hay						
1999		950	3.80	3,610	72.00	259,920
2000		1,000	3.70	3,700	64.50	238,650
2001		900	3.40	3,060	73.50	224,910
2002		870	3.50	3,045	86.50	263,392
2003		850	3.20	2,720	95.00	258,400
Alfalfa seedings						
1999	100					
2000	140					
2001	100					
2002	125					
2003	130					
Other hay						
1999		350	2.30	805	57.00	45,885
2000		300	2.10	630	53.00	33,390
2001		250	2.20	550	52.00	28,600
2002		230	2.20	506	68.00	34,408
2003		200	2.00	400	75.00	30,000
All haylage and greenchop						
2000		310	5.76	1,785		
2001		340	5.82	1,980		
2002		280	6.05	1,694		
2003		270	5.50	1,486		
Alfalfa haylage and greenchop						
2000		280	6.00	1,680		
2001		320	6.00	1,920		
2002		260	6.20	1,612		
2003		250	5.60	1,400		

¹ Marketing year average.

Hay: Stocks on farms, 2000-2004

Year	May 1	December 1
	<i>1,000 tons</i>	<i>1,000 tons</i>
2000	1,170	3,460
2001	1,000	3,450
2002	773	2,024
2003	462	1,872
2004	250	

Maple Syrup

Michigan maple syrup production was estimated at 80,000 gallons for the 2004 season, 21,000 gallons above the 2003 output. This was a very good season for maple syrup producers. Sugar content of the sap was higher, and the syrup was lighter in color.

Michigan ranked fifth in maple syrup production in 2003, up from seventh and produced about 5 percent of the total U.S. production. The tapping season started March 5 and ended March

31 for most producers. Total taps were 370,000 and the syrup yield was 0.216 gallons per tap. In 2004, Michigan producers sold 44 percent of their syrup retail, 44 percent wholesale, and 12 percent bulk. The average price per gallon for 2003 was \$31.20 compared with \$32.50 in 2002. The value of production for 2003 was \$1.8 million down 16 percent from 2002.

Maple syrup: Taps, yield, production, price, and value, 2000-2004

Year	Taps	Yield per tap	Production	Price per gallon	Value of production
	<i>1,000</i>	<i>Gallons</i>	<i>1,000 gallons</i>	<i>Dollars</i>	<i>1,000 dollars</i>
2000			44	35.10	1,544
2001	332	0.181	60	29.70	1,782
2002	320	0.206	75	32.50	2,145
2003	360	0.164	59	31.20	1,800
2004	370	0.216	80	(¹)	(¹)

¹ Published in June 2005.

Mint

Mint: Acres, yield, production, and value, 1999-2003

Year	Harvested	Yield	Production	Price per pound ¹	Value of production
	<i>1,000 acres</i>	<i>Pounds</i>	<i>1,000 Pounds</i>	<i>Dollars</i>	<i>1,000 dollars</i>
Peppermint					
2000	1.0	50	50	9.20	450
2001	1.0	50	50	9.90	495
2002	1.0	50	50	10.00	500
2003	1.1	40	44	11.00	484
Spearmint					
1999	1.7	40	68	10.00	680
2000	1.7	45	77	9.20	708
2001	1.7	50	85	9.80	833
2002	1.7	50	85	9.00	765
2003	1.6	40	64	9.50	608

¹ Marketing year average.

Oats

Oat acreage increased in Michigan during 2003. Growers planted 90,000 acres of oats in 2003 compared with 80,000 the year before. Harvested acres, at 75,000, were up 10,000 from last year. The 2003 oat production was 5.25 million bushels, up 26 percent from the previous year. Yields jumped to 70 bushels per acre, a new record high. Farmers dodged rain showers in early May to get the oat crop planted on par with the five-year average. The crop emerged on schedule but progress was delayed by cool, wet

weather. By the end of July, almost 70 percent of the crop was rated good to excellent. Harvest began later than normal and early on was delayed by rain. Hot, dry weather during the second half of August allowed farmers to finish up in a timely manner. Sanilac county ranked first in oat production for 2003, while Isabella, Montcalm, Huron, and Shiawassee rounded out the top five counties.

Oats: Acres, yield, production, and value, 1999-2003

Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Bushels</i>	<i>1,000 bushels</i>	<i>Dollars</i>	<i>1,000 dollars</i>
1999	100	75	65	4,875	1.35	6,581
2000	95	75	64	4,800	1.30	6,240
2001	70	55	64	3,520	1.80	6,336
2002	80	65	64	4,160	1.80	7,488
2003	90	75	70	5,250	1.60	8,400

¹ Marketing year average.

Potatoes

Michigan's 2003 potato production was 15.02 million hundredweight (cwt) up from 13.88 million in 2002. Planted acres were 46,000 and harvested acres were 45,500. The State's average yield was 330 cwt per acre, up from 305 cwt per acre in 2002 and a new record high. Potato planting began in the middle of April and was completed by the end of May. Early cool and wet conditions hampered early development; however, favorable weather during the growing season led to excellent yields and quality. A few areas

were adversely affected by leafhoppers. Potato harvest began in late July and continued into October.

Michigan ranked ninth among states in potato production in 2003. Most Michigan potatoes are whites, which comprised approximately 83 percent of planted acreage, followed by russets and reds at 13 and 4 percent of planted acreage, respectively. Whites are processed for potato ships or sold for table use while russets are used for french fries and other frozen products.

Fall potatoes: Acres, yield, production, and value, 1999-2003

Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Cwt</i>	<i>1,000 cwt</i>	<i>Dollars</i>	<i>1,000 dollars</i>
1999	48.0	47.5	315	14,963	6.80	101,748
2000	49.0	47.5	315	14,963	6.70	100,252
2001	46.0	45.0	310	13,950	7.65	106,718
2002	46.5	45.5	305	13,878	7.80	108,248
2003	46.0	45.5	330	15,015	7.05	105,856

¹ Marketing year average.

Fall potatoes: Stocks by type as percent of total stocks, December 1, 1999-2003

Type	1999	2000	2001	2002	2003
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
White	87	86	90	88	86
Russet	11	12	9	11	13
Red	2	2	1	1	1

Fall potatoes: Production and disposition, 1999-2003

Crop year	Production	Total used for seed	Farm Disposition		Sold
			Seed, feed, and home use	Shrinkage and loss	
	<i>1,000 cwt</i>	<i>1,000 cwt</i>	<i>1,000 cwt</i>	<i>1,000 cwt</i>	<i>1,000 cwt</i>
1999	14,963	1,005	213	1,300	13,450
2000	14,963	1,099	250	1,700	13,013
2001	13,950	1,181	245	945	12,760
2002	13,878	1,099	205	1,400	12,273
2003	15,015	(¹)	(¹)	(¹)	(¹)

¹ Published in September 2004

Fall potatoes: Stocks, 1999-2003

Crop year	December 1	January 1	February 1	March 1	April 1	May 1
	<i>1,000 cwt</i>	<i>1,000 cwt</i>	<i>1,000 cwt</i>	<i>1,000 cwt</i>	<i>1,000 cwt</i>	<i>1,000 cwt</i>
1999	8,800	7,100	5,800	4,200	2,700	1,300
2000	8,700	6,900	5,200	3,400	1,500	700
2001	8,200	6,200	4,800	3,200	1,500	400
2002	7,900	6,500	5,600	4,500	2,900	1,000
2003	8,400	6,500	5,600	4,700	3,100	1,600

Soybeans

Michigan soybean production totaled 53.7 million bushels, down 32 percent from 2002. The yield was 27 bushels per acre in 2003. Planted and harvested acres were down from the 2002 total to 2.00 million and 1.99 million, respectively. Soybean planting began at a slow pace, but by June 27 earlier planted fields had started to emerge and planting was 34 percent complete. Soybean fields were being sprayed for weeds, but had a nice color and were growing very well in late July. Problems with aphids occurred in

early August due to warm temperatures and a significant amount of rainfall. In late August, aphids, white mold, and cyst nematodes were problems in some fields. Spraying to correct these problems was ongoing. Soybean harvest began in late September. Harvest was nearly complete by the beginning of November. Lenawee, Sanilac, Monroe, Saginaw, and Hillsdale were the top five counties in soybean production.

Soybeans: Acres, yield, production, and value, 1999-2003

Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Bushels</i>	<i>1,000 bushels</i>	<i>Dollars</i>	<i>1,000 dollars</i>
1999	1,950	1,940	40.0	77,600	4.61	357,736
2000	2,050	2,030	36.0	73,080	4.54	331,783
2001	2,150	2,130	30.0	63,900	4.47	285,633
2002	2,050	2,040	38.5	78,540	5.62	441,395
2003	2,000	1,990	27.0	53,730	7.20	386,856

¹ Marketing year average.

Soybeans: Stocks by quarter, 1999-2003

Crop year	December 1		March 1		June 1		September 1	
	On farm	Off farm	On farm	Off farm	On farm	Off farm	On farm	Off farm
	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>
1999	33,000	20,200	17,000	12,750	6,000	6,250	4,100	1,500
2000	30,000	19,800	18,000	9,600	8,500	3,225	2,400	1,220
2001	30,000	20,800	18,000	11,750	7,700	5,450	1,200	1,700
2002	26,000	21,000	16,000	13,450	9,100	5,680	2,800	1,300
2003	18,000	16,900	7,300	8,200	3,200	2,150		

Soybeans: Percentage of acreage planted, 1999-2003

Year	Month and day							
	May			June			July	
	10	20	30	10	20	30	10	
1999	12	49	81	93	99	100	100	
2000	12	29	42	63	82	94	100	
2001	31	58	75	80	91	96	100	
2002	16	26	59	88	98	100	100	
2003	7	18	55	83	97	100	100	
5-year-average	15.6	36.0	62.4	81.4	93.4	98.0	100.0	

Soybeans: Percentage of acreage setting pods, 1999-2003

Year	Month and day						
	July			August			
	10	20	30	10	20	30	
1999	0	20	48	77	93	100	
2000	0	4	20	42	74	86	
2001	0	15	46	70	84	94	
2002	0	4	29	62	95	100	
2003	0	2	16	50	82	97	
5-year-average	0.0	9.0	31.8	60.2	85.6	95.4	

Soybeans: Percentage of acreage shedding leaves, 1999-2003

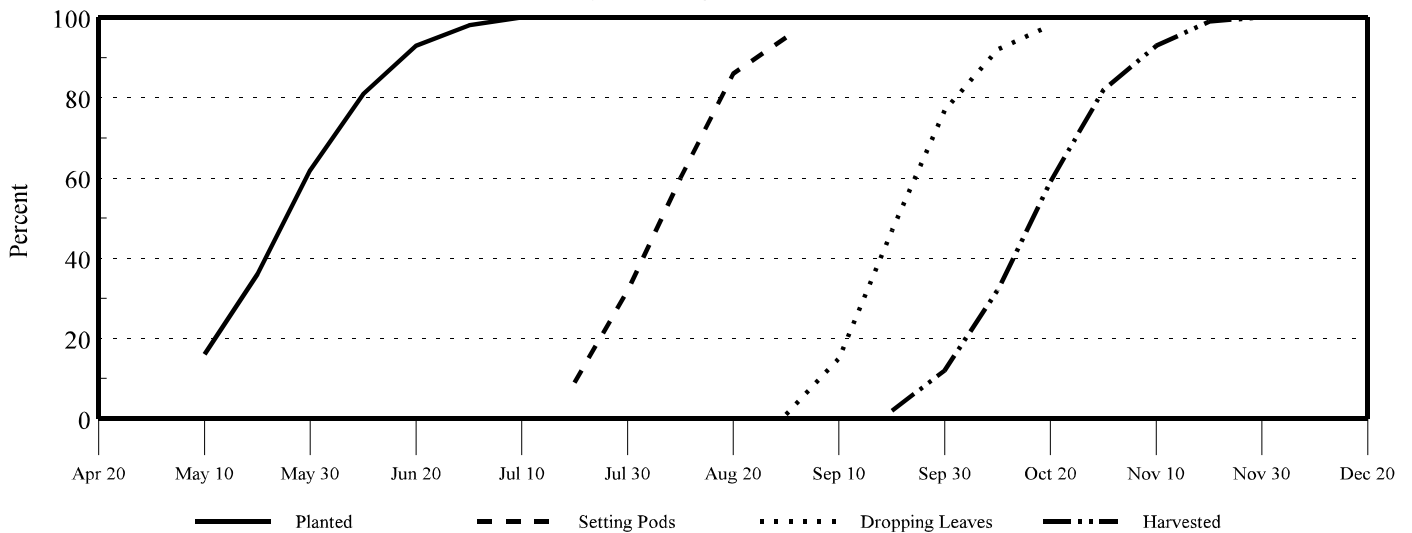
Year	Month and day						
	August		September			October	
	20	30	10	20	30	10	20
1999	0	2	31	66	98	100	100
2000	0	0	3	26	54	78	93
2001	0	4	18	47	64	87	99
2002	0	0	17	52	89	99	100
2003	0	0	5	44	80	97	100
5-year-average	0.0	1.2	14.8	47.0	77.0	92.2	98.4

Soybeans: Percentage of acreage harvested, 1999-2003

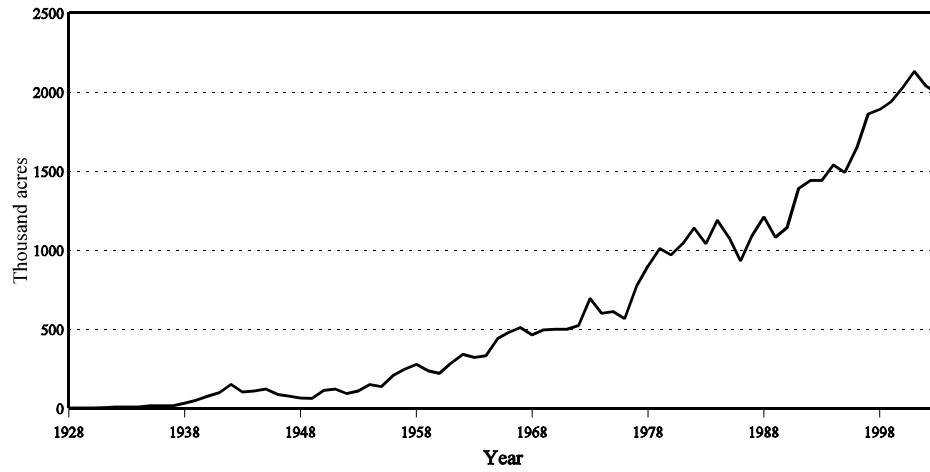
Year	Month and day								
	September			October			November		
	10	20	30	10	20	30	10	20	30
1999	0	5	22	46	66	92	98	100	100
2000	0	0	3	15	48	76	92	100	100
2001	0	1	6	18	36	57	79	96	100
2002	0	4	20	45	73	93	100	100	100
2003	0	0	7	35	72	91	98	100	100
5-year-average	0.0	2.0	11.6	31.8	59.0	81.8	93.4	99.2	100.0

Soybean progress

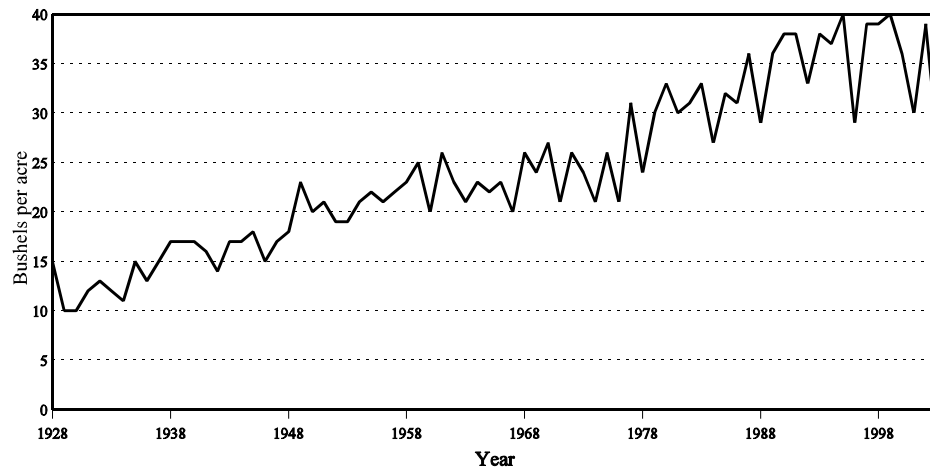
Five-year-average, 1999-2003



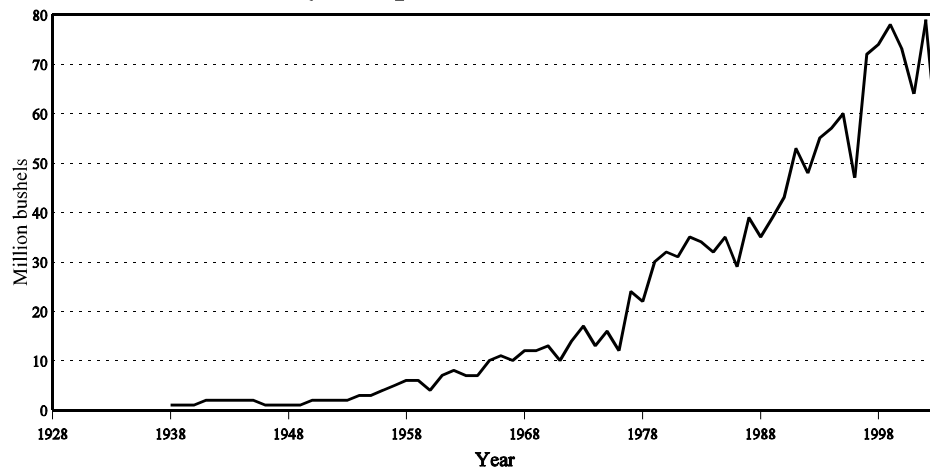
Soybean harvested acres, 1928-2003



Soybean yield, 1928-2003



Soybean production, 1928-2003



Sugarbeets

Acres planted to sugarbeets were estimated at 179,000, unchanged from the previous year. Harvested acreage was estimated at 178,000, up from 177,000 in 2002. All of the crop was planted by the middle of May. Planting conditions for sugarbeets were good. Sugarbeet harvest began slowly due to a lack of soil

moisture. Rain in early October softened up the soil and made harvest easier. Sugarbeet harvest was completed by the middle of November. Yields averaged 19.1 tons per acres compared with 18.1 tons per acre in 2002. Huron and Tuscola were the top sugarbeet producing counties for 2003.

Sugarbeets: Acres, yield, production, and value, 1999-2003

Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Tons</i>	<i>1,000 tons</i>	<i>Dollars</i>	<i>1,000 dollars</i>
1999	194	190	18.6	3,534	32.80	115,915
2000	189	166	20.5	3,403	31.30	106,514
2001	180	166	19.4	3,220	34.80	112,056
2002	179	177	18.1	3,204	38.20	122,393
2003	179	178	19.1	3,400	(²)	(²)

¹ Marketing year average.

² Published in February 2005.

Wheat

Michigan's 2003 winter wheat crop totaled 44.9 million bushels, up 15.4 million bushels from 2002. Planted acres were up from 450,000 acres the previous year to 680,000. Harvested acreage was at 660,000 acres. The average yield was 68 bushels per acre. The value of the crop rose 53 percent to \$148 million. Huron, Sanilac, Lenawee, Saginaw and Tuscola were the top five counties in wheat production.

Planting began on schedule in early September and moved along slightly ahead of normal. Emergence was right on track with the five-year average. The crop over-wintered fairly well and by the

second week of May, 67 percent of the crop was rated good to excellent. However, cool, wet weather late in the spring hampered development. By June 1, only 14 percent of the crop was headed, compared to the five-year average of 58 percent.

Warm weather late in June pushed the crop toward maturity but still later than normal. Harvest began about two weeks later than average. A stretch of good weather during combining allowed the crop to be harvested in a timely manner. By the first part of August, most combining was completed.

Wheat: Acres, yield, production, and value, 1999-2003

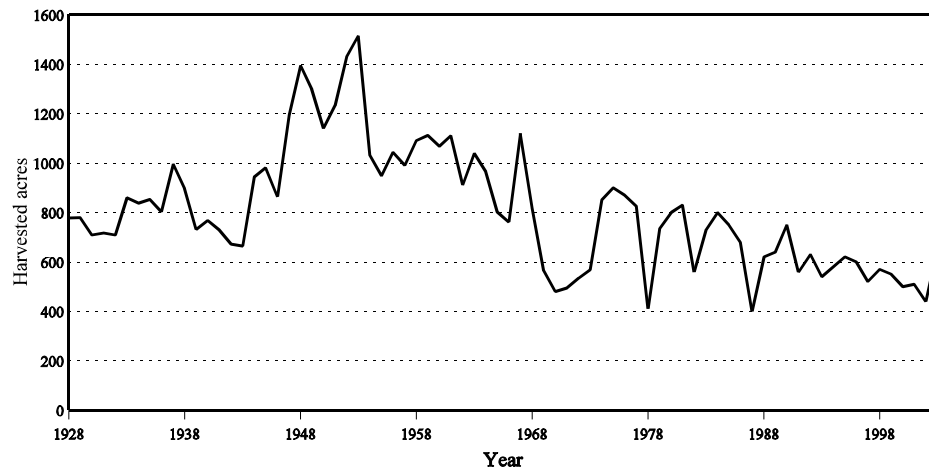
Year	Planted	Harvested	Yield	Production	Price ¹	Value of production
	<i>1,000 acres</i>	<i>1,000 acres</i>	<i>Bushels</i>	<i>1,000 bushels</i>	<i>Dollars</i>	<i>1,000 dollars</i>
1999	560	550	69	37,950	2.12	80,454
2000	530	500	72	36,000	2.11	75,960
2001	520	510	64	32,640	2.43	79,315
2002	450	440	67	29,480	3.28	96,694
2003	680	660	68	44,880	3.30	148,104

¹ Marketing year average.

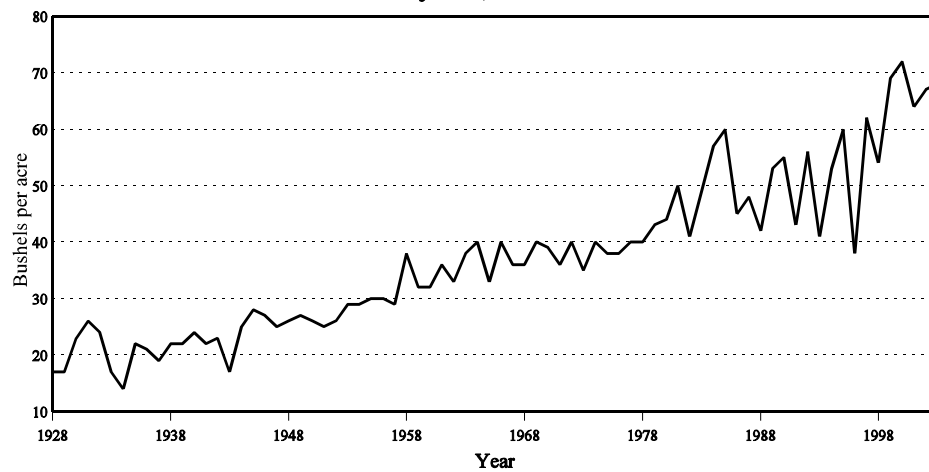
Wheat: Stocks by quarter, 1999-2003

Crop year	September 1		December 1		March 1		June 1	
	On farm	Off farm	On farm	Off farm	On farm	Off farm	On farm	Off farm
	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>	<i>1,000 bushels</i>
1999	5,000	31,050	3,000	25,050	2,800	19,450	1,900	12,900
2000	7,000	28,950	4,100	22,400	3,000	17,150	800	12,380
2001	4,500	25,900	3,300	19,700	1,200	16,050	600	11,330
2002	2,800	23,700	1,200	15,700	400	12,450	300	6,275
2003	5,000	28,430	2,800	23,050	600	15,190	300	7,400

Wheat harvested acres, 1928-2003



Wheat yield, 1928-2003



Wheat production, 1928-2003

